

Name: _____

Remediation – Point Slope Formula – Given a Point and a Slope

After you have watched the video from the wiki, you should try the following problems and then use the key to check your work. You should use your calculator to check your answer before you use the answer key so that you practice troubleshooting your own work.

Directions: Please determine the slope-intercept equation of the line with the given slope that intersects the given point.

$$y - y_1 = m(x - x_1)$$

1. $m = \frac{2}{3}$ (6, -9)

$$y - (-9) = \frac{2}{3}(x - 6)$$

$$y + 9 = \frac{2}{3}x - 4$$

$$y = \frac{2}{3}x - 13$$

3. $m = \frac{5}{7}$ (3, 2)

$$y - 2 = \frac{5}{7}(x - 3)$$

$$y - 2 = \frac{5}{7}x - \frac{15}{7}$$

$$y = \frac{5}{7}x - \frac{1}{7}$$

5. $m = -1$ (-5, -12)

$$y - (-12) = -1(x - (-5))$$

$$y + 12 = -1(x + 5)$$

$$y + 12 = -x - 5$$

$$y = -x - 17$$

2. $m = -\frac{5}{2}$ (-8, 2)

$$y - 2 = -\frac{5}{2}(x - (-8))$$

$$y - 2 = -\frac{5}{2}(x + 8)$$

$$y - 2 = -\frac{5}{2}x - 20$$

$$y = -\frac{5}{2}x - 18$$

4. $m = 0$ (7, -5)

$$y - (-5) = 0(x - 7)$$

$$y + 5 = 0$$

$$y = -5$$

6. $m = -7$ $(\frac{2}{3}, 0)$

$$y - 0 = -7(x - \frac{2}{3})$$

$$y = -7x + \frac{14}{3}$$

$$\text{or } y = -7x + 4\frac{2}{3}$$